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The Files

11 December 1956

25X1
25X1

RT-11A/B/C - Trip Report

25X1

1. General - A visit was made to the [redacted] on 7 December 1956 in connection with (1) XG-1355 for the RT-11A/B (2) XG-85, Task Order 2 for the RT-11 Power System and (3) XG-85, Task Order 3 for the RT-11C for SAC. Present were:

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Mr. [redacted]
Mr. [redacted]
Mr. [redacted] OC-3/RAD-12

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2. Dial Mechanism - A major defect of the receiver is that the tape drive mechanism tears the tape. The contractor has now completely redesigned the sprocket so that a minimum of three teeth engage the tape at all times. (A single tooth engaged the tape in earlier models.) Additionally, flanges have been added to the rollers and sprocket to insure correct tape alignment. It is felt that the contractor has found a satisfactory solution to a difficult problem.

3. Dial Calibration - In examining the new tape drive mechanism, it was observed that the inked numbers and calibration marks on the dial tape were wearing off. It was also noted that the ink was coming off on the new sprocket and the tape loading spring which have surfaces that engage the inked surface of the tape. The contractor agreed to contact Dupont whom it was felt could best advise [redacted] on a satisfactory ink for Mylar tape. [redacted] said that Eastman Kodak was developing a process for sensitizing Mylar tape, a twin sister to Mylar (also made by Dupont) using photographic processes to place calibration marks or other data on dial tapes. Should the development work by Eastman prove successful such a tape might be provided for production equipment.

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4. Key Click Radiation - The contractor has installed a new key click filter in the RT-11A/B and the undersigned witnessed tests with the Stoddart NM-20-A field intensity meter with the following results:

Freq.	Quasi-peak microvolts	
	Unit #1	Unit #2
150 kc/s	500	800
300 "	0	0
500 "	400	600

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	Unit #1	Unit #2
1. kc/s	600	0
2. "	300	600
3. "	500	200
4. "	200	100

The above figures compare with a nominal 4000 microvolt reading at 150 kc/s with earlier filter attempts. The filter consists of 6 components, a choke, condenser and resistor on both sides of the key in the B plus lead. The resistor value is 100 ohms which results in a B plus drop of 10 volts and a reduction of .5 watts in power output. The contractor agreed to make further investigations to provide a filter without such a resultant loss in power output.

5. Progress Reports - The contractor was again reminded that Task Orders 2 and 3 of DO-85 require that progress reports be submitted bi-monthly and that progress report No. 2 was overdue on Task Order 2 and that no progress reports have been received for Task Order 3. [redacted] said he would have progress reports in the mail next week. 25X1

6. DO-85, Task Order 2 - This task is for the development of an RS-411/P power system to include an AC power supply and a hand crank generator. Development activity is not very progressive and little has been accomplished since the last visit.

a. The AC power supply has been breadboarded and the contractor advised that he was waiting for a new power transformer being supplied by a subcontractor. Inquiries were made concerning the internal impedance of the power devices since transmitter design is such that the 5R5 power output tubes draw excessive current when keyed in an unloaded or detuned condition. Tests were made and the total B current was 150 ma or about 70 ma per tube. The 5R5 is rated at 50 ma max. The undersigned expressed the view that additional internal impedance was needed in the power supply to restrict current drawn by the transmitter when running wide open. (The Laboratory has reported a 200 ma drain with a regulated power supply - apparently the 5R5 is a very rugged tube.)

b. Little has been accomplished by the contractor in hand crank generator design and nothing was mentioned in his initial progress report. Mr. [redacted] indicated that the delay was due to a lack of contractual authority to sub-contract for $7,000 and showed us a copy of a letter asking for such authority which had just been mailed. The company was advised that the government could hardly approve of a subcontract in that amount since funds were not available and reference was made to an earlier request by [redacted] in which they asked for "permission to submit a cost breakdown" for an increase in funds for Task Order 2. The overrun amounts to almost 100 per cent. Mr. [redacted] said he would submit a cost breakdown for his overrun to the Contracting Officer next week. 25X1 25X1

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7. [illegible]-85, Task Order 3 - The AN-ILC development has been brought up to par with the AN-ILA/B development and delivery of such units will be simultaneous with the latter equipment.

8. Delivery - [redacted] is to air express a transmitter and receiver for Laboratory evaluation next week. Should these units be acceptable, the contractor feels that all prototype units can be delivered in less than two months after a "go ahead" is received. 25X1

[redacted] 25X1

CC-3/R&D-EF/CEM:jac (11 December 1956)

cc: R&D Subject File (3 copies)
Monthly Report (2)
Lab
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